

U.S. Serial No. 09/806873
Reply to Office Action of: September 22, 2003
Family Number: P1998J096 US2

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A long life gas engine oil comprising a major amount of an oil of lubricating viscosity and a minor amount of additives comprising phenolic anti oxidants, a low ash gas engine oil detergent system having a TBN of about 50 to about 300, from about 0.05 to about 1.5 vol% of antiwear additives and viscosity index improver which does not contain aminic anti oxidant, wherein the oil of lubricating viscosity has a viscosity of between 9 to 13 cSt at 100°C, said oil of lubricating viscosity being a synthetic, hydrocracked or solvent refined oil or mixtures thereof, and which oil of lubricating viscosity does not contain a base stock having a viscosity of 20 cSt or higher at 100°C, wherein the phenolic anti oxidant is present in an amount in the range of about 0.1 to 2 vol% and the viscosity index improver is present in an amount sufficient to increase the viscosity of the engine oil to about 13.2 cSt at 100°C and wherein said amount is in the range of about 0.1 to 3 vol%, the antiwear additive is present in the range of about 0.2 to 0.5 vol %, and wherein the gas engine oil has a low ash content in the range of 0.1 to 0.6 wt%.

2. (Canceled)

3. (Canceled)

4. (Previously Presented) The long life gas engine oil of claim 10 wherein the phenolic anti oxidant is present in an amount in the range of about 0.3 to 1.75 vol% and the viscosity index improver is present in an amount in the range of about 0.2 to 2 vol%.

5. (Original) The long life gas engine oil of claim 4 wherein the oil of lubricating viscosity has a viscosity of between about 9 to 13 cSt at 100 °C, the phenolic

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anti oxidant is present in an amount in the range of about 0.5 to 1.5 vol% and the viscosity index improver is present in an amount in the range of about 0.3 to 1.5 vol%.

6. (Currently Amended) A method for enhancing the life of gas engine oils as evidenced by a reduction in viscosity increase, oxidation, nitration, TAN increase, and TBN depletion, comprising adding to a gas engine oil base stock having a viscosity of 100°C of from 9 to 13 cSt, the base stock being a synthetic, hydrocracked or solvent refined oil or mixture thereof but which base stock does not contain a base stock having a viscosity of 20 cSt or higher at 100°C, a minor amount of an anti oxidant in the range of about 0.1 to 2 vol% from about ~~0.05~~ 0.2 to about 0.5 ~~1.5~~ vol% of antiwear additives, and a minor amount of a viscosity index improver in the range of about 0.1 to 3 vol% which does not contain aminic anti oxidants and, wherein the anti oxidant is selected from the group consisting of phenolic anti oxidants, and a minor amount of a low ash gas engine oil detergent system having a TBN of about 50 to about 300 wherein the gas engine oil has a low ash content in the range of 0.1 to 0.6 wt%.

7. (Canceled)

8. (Canceled)

9. (Previously Presented) The method of claim 12 herein the phenol anti oxidant is added to the lubricating oil in an amount in the range of about 0.3 to 1.75 vol% and the viscosity index improver is added to the lubricating oil in an amount in the range of about 0.2 to 2 vol%.

10. (Previously Presented) The oil of claim 1 wherein the oil of lubricating viscosity is a mixture of a hydrocracked oil and a solvent refined oil.

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11. (Previously Presented) The oil of claim 4 wherein the detergent system is a mixture of detergent comprising at least one first alkali or alkaline earth metal salt having a TBN below about 250 and at least one second alkali or alkaline earth metal salt having a TBN of about one-half or less of the first salt.

12. (Previously Presented) The method of claim 6 wherein the basestock is a mixture of a hydrocracked oil and a solvent refined oil.

13. (Previously Presented) The method of claim 9 wherein the detergent system is a mixture of detergent comprising at least one first alkali or alkaline earth metal salt having a TBN below about 250 and at least one second alkali or alkaline earth metal salt having a TBN of about one-half or less of the first salt.